

The listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-20 (Cancelled).

Claim 21 (New): Process for producing a protein by heterologous expression in a host microorganism containing a gene sequence encoding the heterologous protein, wherein the microorganism is genetically manipulated to contain a DNA sequence encoding the chaperonin of *Oleispira antarctica* Cpn60 and/or Cpn10 (Seq ID No. 1 and/or 2) or a functional mutant thereof and in using a cultivation temperature of below 25°C.

Claim 22 (New): Process according to claim 21, wherein the microorganism is selected from the group comprising animal cell lines, plant cell lines, Gram-positive or Gram-negative bacteria, fungi and yeasts.

Claim 23 (New): Process according to claim 21, wherein the chaperonin Cpn60 and/or Cpn10 (Seq ID No. 1 and/or 2) is replaced by a stabilized single ring mutant chaperonin Glu461

Ala/Ser463Ala/Val464Ala (Seq ID No. 16) or a mutant chaperonin Lys468Thr/Ser471 Gly of Cpn 60 and/or Cpn10.

Claim 24 (New): Process according to claim 21, wherein the heterologous protein is selected from the group consisting of mammalian proteins, psychrophilic mammalian or bacterial proteins, mesophilic bacterial, fungal or yeast proteins, and mutant or fusion variants thereof.

Claim 25 (New): Process according to claim 21, wherein the heterologous protein has enzymatic activity or hormonal activity in its native conformation.

Claim 26 (New): Process according to claim 21, wherein the cultivation temperature is 4 to 15°C.

Claim 27 (New): Plant, wherein it can grow at lower ambient temperatures due to the presence of a DNA sequence encoding a cold active functional chaperonin of a psychrophilic bacterium or plant.

Claim 28 (New): Plant according to claim 27, wherein the DNA sequence encoding a cold active functional chaperonin is selected

from the group consisting of Cpn60 and/or Cpn10 (Seq ID No. 1 and/or 2) of *Oleispira antarctica*, a functional homolog thereof, and a stabilized single ring mutant chaperonin Glu461Ala/Ser463Ala/Val464Ala of Cpn60 (Seq ID No. 16).

Claim 29 (New): Plant according to claim 27, wherein the cultivation temperature is 4 to 15°C.

Claim 30 (New): Use of a plant according to claim 27 for the production of protein by heterologous expression.